

Notice of Allowability

Application No.

10/669,478

Examiner

Inder P. Mehra

Applicant(s)

FNU ET AL.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment dated: 2/9/07 and Supplemental Amendment dated: 3/9/07.
2. ☒ The allowed claim(s) is/are 2-7,9-10,8,11-18,20-21 and 27-30 (Renumbered as 1-23 respectively).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 3/9/07
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 3/9/07.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. This office action is in response to amendment dated: 2/9/2007 and Supplemental Amendment dated: 3/9/2007 filed by FAX. Based on Supplemental Amendment, claims 1, 19 and 22-26 are cancelled.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 3/9/07 was filed by Fax on 3/9/07. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Gregory J. Gorrie, Attorney, Reg. No. 36,530 on 3/9/07. The application has been amended as follows:

Claim 1 has been cancelled.

Claim 19 has been cancelled.

Claim 22 has been cancelled.

Claim 23 has been cancelled.

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Claim 24 has been cancelled.

Claim 25 has been cancelled.

Claim 26 has been cancelled.

Refer to claim 3. This claim has been replaced by following claim:

3. (Currently Amended) The method of claim [[1]] 2 further comprising scanning to determine network identifiers associated with the one or more active channels, and wherein the maintaining comprises:

generating one or more single bitmaps for the one or more active channels associated with single network identifiers; and

storing the bitmaps in a bitmap table, and

wherein to either associate or reassociate, the method comprises:

scanning the one or more active channels identified in the bitmap table; and

refraining from scanning for channels not identified in the bitmap table to reduce scan time.

Refer to claim 4. This claim has been replaced by following claim:

4. (Currently Amended) The method of claim [[1]] 2 further comprising:

scanning predetermined channels to identify network identifiers associated with active of the predetermined channels; and

generating a bitmap for the active channels and their associated network identifiers,

wherein the predetermined channels are predetermined for a geographic location.

Refer to claim 7. This claim has been replaced by following claim:

7. (Currently Amended) The method of claim [[1]] 2 further comprising passively scanning channels, and waiting for receipt of a beacon frame, the beacon frame including the network identifier associated with one of the scanned channels.

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Refer to claim 27 line 1. Limitation “machine-readable” has been changed to “---
computer-readable ---”

Refer to claim 28 line 1. Limitation “machine-readable” has been changed to “---
computer-readable---”.

Refer to claim 29 line 1. Limitation “machine-readable” has been changed to “---
computer-readable---”

Refer to claim 30 line 1. Limitation “machine-readable” has been changed to “---
computer-readable---”

Allowable Subject Matter

4. Claims 2-18, 20-21, and 27-30 are allowed.

REASONS FOR ALLOWANCE

5. The following is an examiner’s statement of reasons for allowance:

The prior art of record does not disclose, teach or suggest directly, or indirectly the following limitations in combinations with other limitations of the claims, as follows:

As recited by claim 2,

“associating with a wireless network using the mapping for one of the active channels associated with a selected network identifier,

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wherein the method is performed by a communication unit to reduce scan time in a wireless local area network, and wherein the maintaining the mapping is performed by one of driver circuitry, firmware and network-interface circuitry,

wherein the associating is performed by network-interface circuitry tuning to the one of the active channels in response to the mapping, the mapping comprising one of either a bitmap, an array, a linked list, or a hash table, and

wherein the network-interface circuitry to determine the mapping based on the network identifier provided by an operating system”.

As recited by claim 10,

“passively scanning channels by waiting for receipt of a beacon frame, the beacon frame including the network identifier associated with one of the passively scanned channels,

actively scanning predetermined channels by transmitting a probe request on at least one of the predetermined channels and waiting to receive a probe response from an access point, the probe response including the network identifier associated with an active channel,

wherein the predetermined channels are independent basic service set channels for a geographic location”.

As recited by claim 12,

“network-interface circuitry to maintain a single mapping for one or more active channels associated with a single network identifier; and

transceiver circuitry to tune to one of the active channels using the mapping to allow the communication unit to either associate or reassociate with a wireless network having the associated network identifier,

wherein the mapping comprises one of either a bitmap, an array, a linked list, or a hash table, and

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wherein to either associate or reassociate, the transceiver circuitry scans the one or more active channels identified in the bitmap table, and refrains from scanning channels not identified in the bitmap table to reduce scan time”.

As recited by claim 13,

“wherein the mapping comprises one of a bitmap, an array, a linked list, or a hash table, wherein the network-interface circuitry includes driver circuitry to maintain a bitmap table for the active channels, and

wherein the driver circuitry to generate bitmaps for the active channels and to store the bitmaps in the bitmap table, the bitmap table to associate the bitmaps and network identifiers for the active channels”.

As recited by claim 14,

“an operating system, wherein the mapping comprises one of either a bitmap, an array, a linked list, or a hash table, and

wherein the operating system in conjunction with the network-interface circuitry to scan predetermined channels to identify network identifiers associated with active of the predetermined channels, and the driver circuitry to generate single bitmaps for one or more active channels and their associated network identifiers”.

As recited by claim 20,

“wherein the mapping comprises one of a bitmap, an array, a linked list, or a hash table, wherein the network-interface circuitry includes driver circuitry to maintain a bitmap table for the active channels, wherein the driver circuitry to generate the bitmaps for the active channels and to store the bitmaps in the bitmap table, the table associating the bitmaps and network identifiers for the active channels, and

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wherein to either associate or reassociate with the wireless network, the transceiver circuitry scans the one or more active channels identified in the bitmap table, and refrains from scanning channels not identified in the bitmap table to reduce scan time”.

As recited by claim 27,

“provides instructions, which when executed by one or more processors, cause said set of processors to perform operations comprising reducing scan time in a wireless-networking environment and include maintaining a single bitmap in a bitmap table for one or more active channels associated with a single network identifier and another bitmap based on predetermined channels,

wherein to either associate or reassociate, the operations further comprise instructing a transceiver to scan the one or more active channels identified in the bitmap table, and to refrain from scanning for channels not identified in the bitmap table to reduce scan time”.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Inder Pal Mehra 3/10/07

Inder P Mehra
Examiner
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JOSEPH FEILD
SUPERVISORY PATENT EXAMINER